CLAIMS

We claim:

1. A weather stripping for use in sealing an interface between selected portions of a vehicle, comprising:

a body portion that is adapted to be supported on a selected one of the vehicle portions; and

a sealing portion extending at least partially away from the body portion, the sealing portion and the body portion comprising a thermoplastic material with at least the sealing portion having a microcellular structure .

2. The weather stripping of claim 1, wherein the thermoplastic material comprises TPV.

3. The weather stripping of claim 2, wherein at least the thermoplastic material of the sealing portion is foamed.

4. The weather stripping of claim 1, wherein the microcellular structure includes cells having a size less than about 2 microns.

5. The weather stripping of claim 4, wherein the microcellular structure includes cells having a size between about .1 micron and about 1.0 micron.

6. The weather stripping of claim 1, wherein the thermoplastic material has a microcellular structure with a cell density in the range from about 10^9 to about 10^{15} per cubic centimeter.

7. The weather stripping of claim 1, wherein at least one of the body portion or the sealing portion has a cross sectional dimension that selectively varies along a length of the weather stripping.

8. A method of making weather stripping for use in sealing an interface between selected portions of a vehicle, comprising the steps of:

melting a thermoplastic material;

introducing a supercritical fluid into the melted thermoplastic material;

forming a microcellular structure in the thermoplastic material using the supercritical fluid; and

forming the weather stripping from the thermoplastic material having the microcellular structure.

9. The method of claim 8, wherein the weather stripping has a sealing portion that has a cross section and including varying the cross section along selected portions of the length of the sealing portion.

10. The method of claim 8, wherein the thermoplastic material comprises TPV.

11. The method of claim 8, including forming the microcellular structure such that the thermoplastic material is a close cell foam.

12. The method of claim 8, including forming the microcellular structure such that the cells have a size less than about 2 microns.

13. The method of claim 12, including forming the microcellular structure such that the cells have a size between about .1 micron and about 1.0 micron.

14. The method of claim 8, including forming the microcellular structure such that the material has a cell density in the range from about 10^9 to about 10^{15} per cubic centimeter.

15. A weather stripping for use in sealing an interface between selected portions of a vehicle, the weather stripping having a body portion that is adapted to be supported on a selected one of the vehicle portions and a sealing portion extending at least partially away from the body portion, made by the process comprising the steps of:

melting a thermoplastic material;

introducing a supercritical fluid into the melted thermoplastic material;

forming a microcellular structure in the thermoplastic material using the supercritical fluid; and

forming the weather stripping from the thermoplastic material having the microcellular structure.

16. The weather stripping of claim 15, wherein the thermoplastic material comprises TPV.

17. The weather stripping of claim 15, wherein the microcellular structure includes cells having a size less than about 2 microns.

18. The weather stripping of claim 17, wherein the microcellular structure includes cells having a size between about .1 micron and about 1.0 micron.

19. The weather stripping of claim 15, wherein the thermoplastic material has a cell density in the range from about 10^9 to about 10^{15} per cubic centimeter.

20. The weather stripping of claim 15, wherein at least one of the body portion or the sealing portion has a cross sectional dimension that selectively varies along a length of the weather stripping.